

Micro-frontends on the edge

una storia di persone, migrazioni e serverless

@_maxgallo

Ciao, sono Max



Principal Engineer @ DAZN



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Agenda

Contesto

Migrazione

Lambda @ Edge

Analisi Soluzione

Contesto

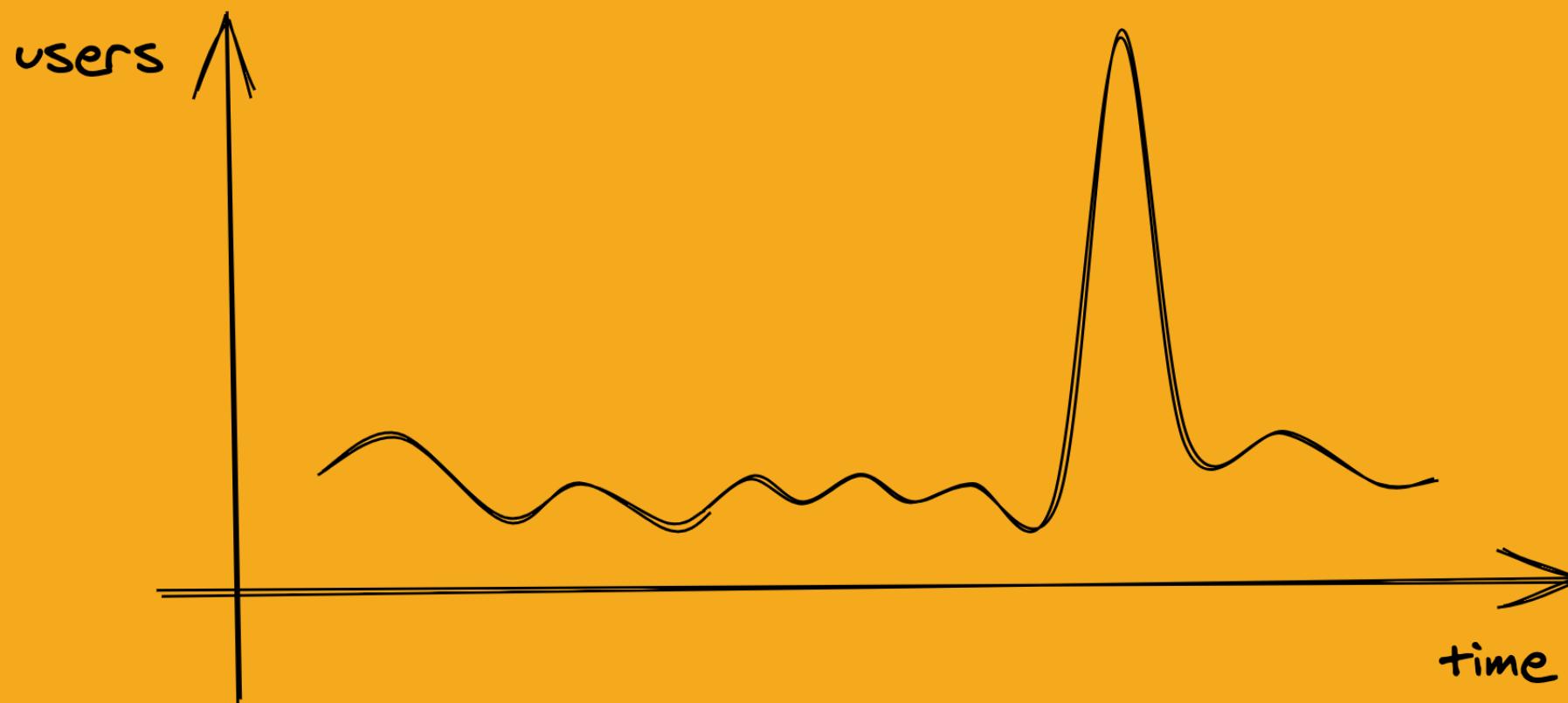
Migrazione

Lambda @ Edge

Analisi Soluzione

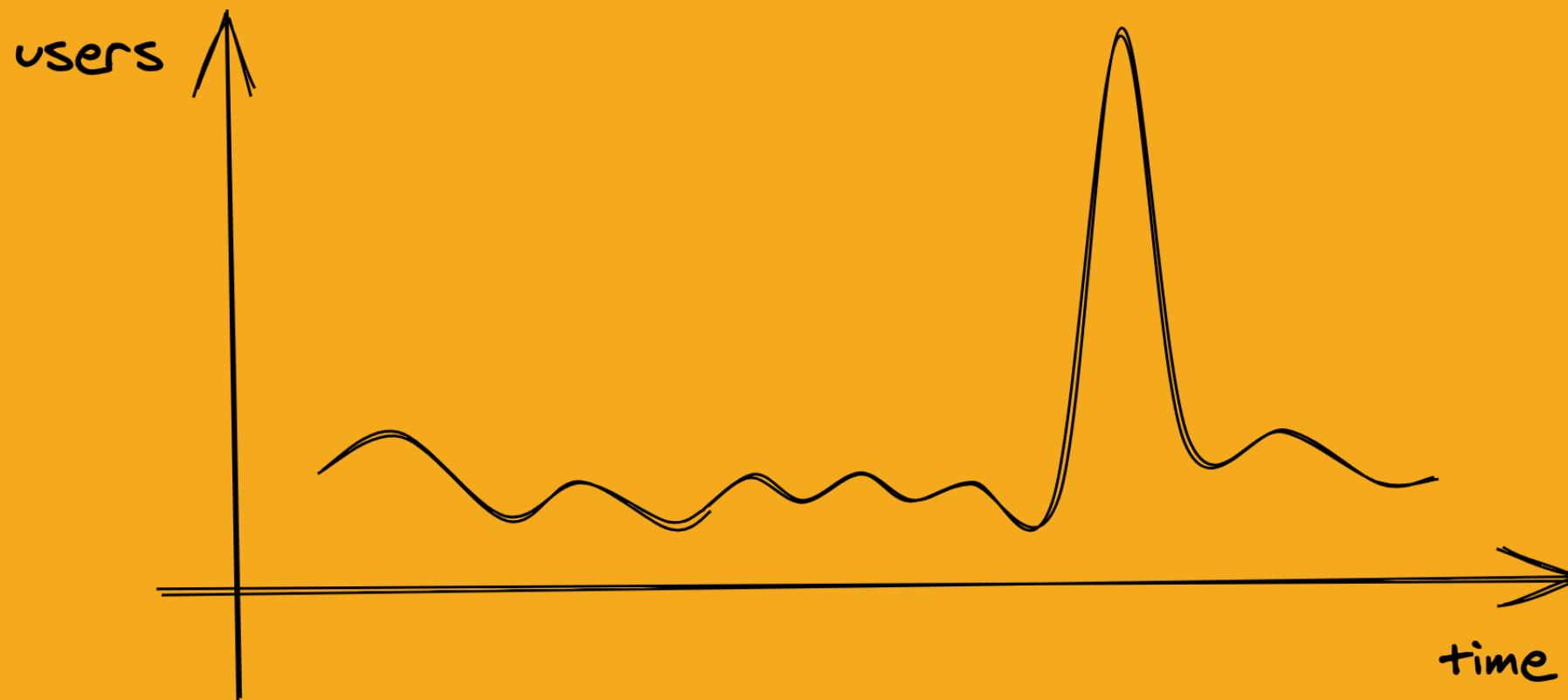
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Spike di utenti

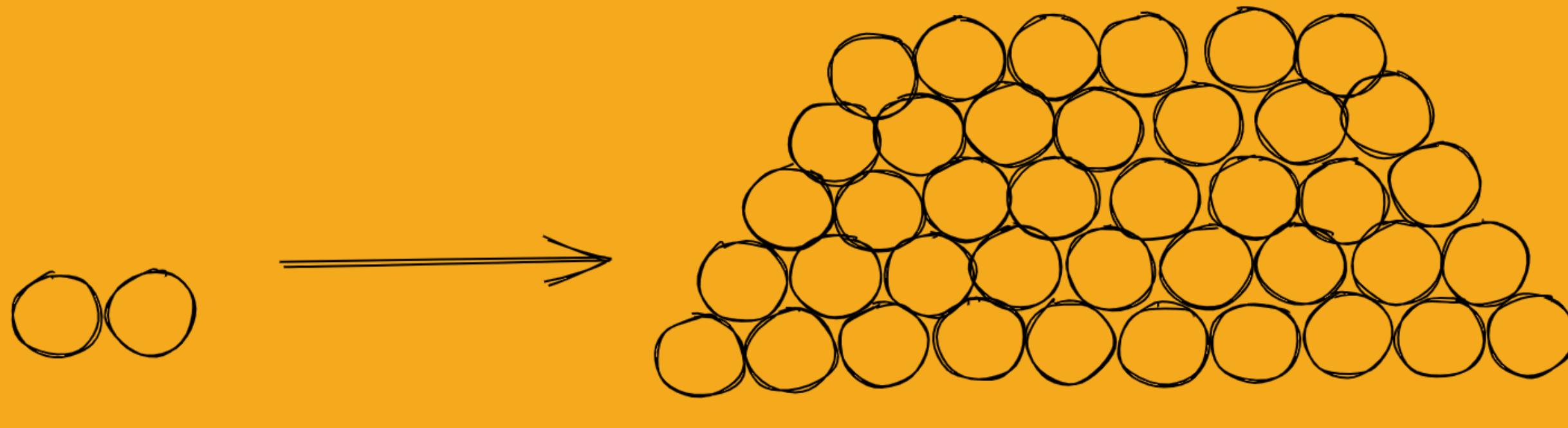


Spike di utenti

→ Scalabilità



Team in Espansione



DAZN
2017

DAZN
2020

* ogni  sono cinque sviluppatori

Team in Espansione

→ Indipendenza



* ogni  sono cinque sviluppatori

Eventi Live

GooooooooooooooAL !!!

Eventi Live

→ Velocità

GoooooooooooooAL !!!

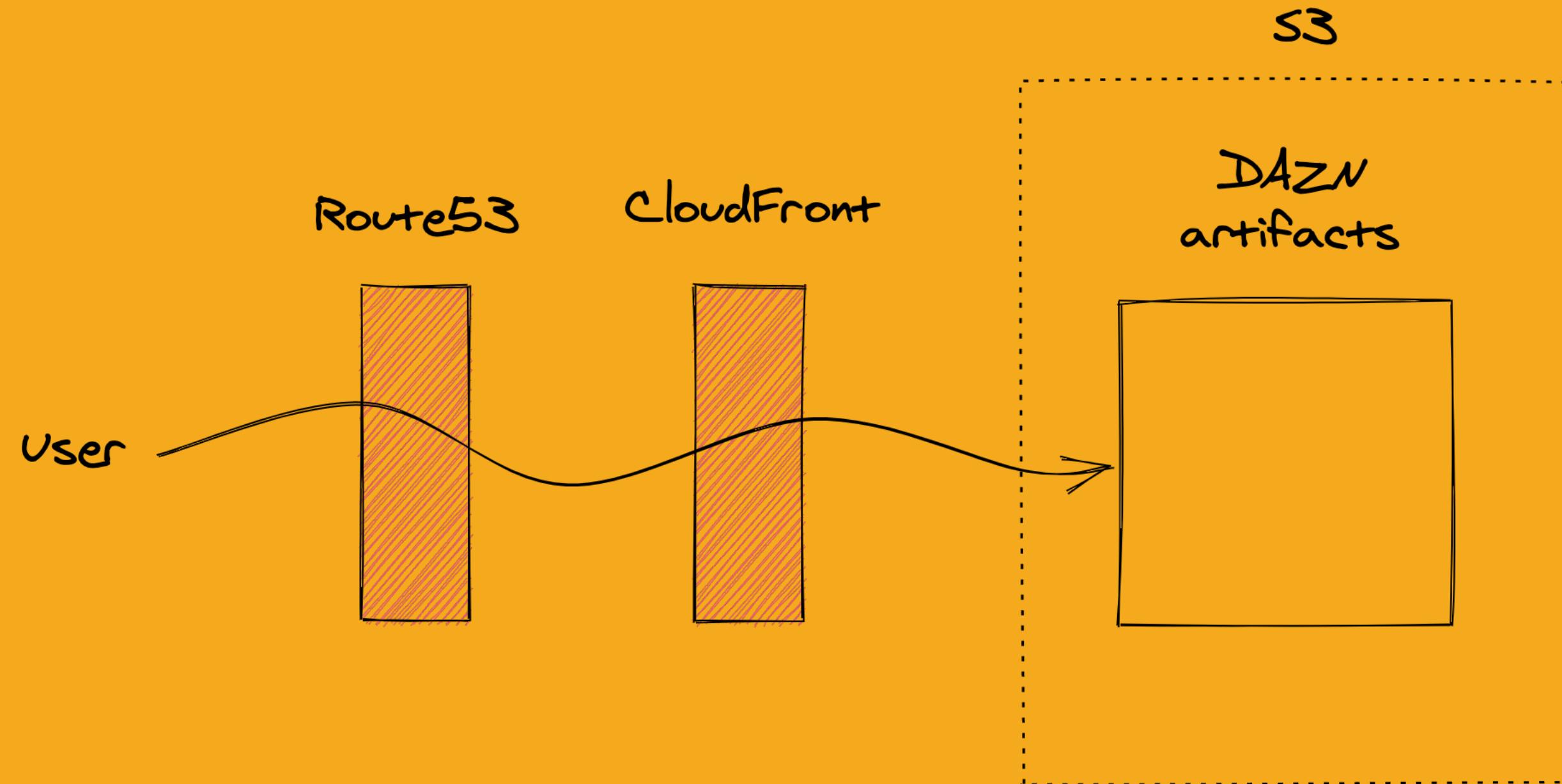
Spike di utenti

Team in Espansione

Eventi Live

Contesto

Santa Trinità di AWS



Contesto

Migrazione

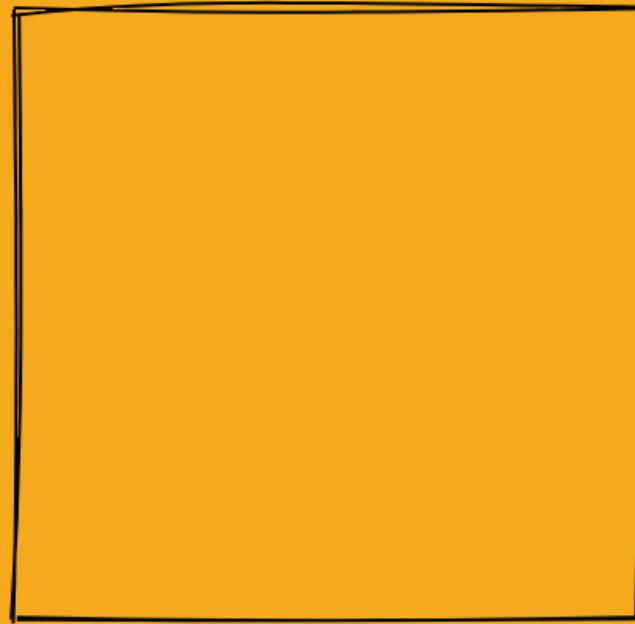
Lambda @ Edge

Analisi Soluzione

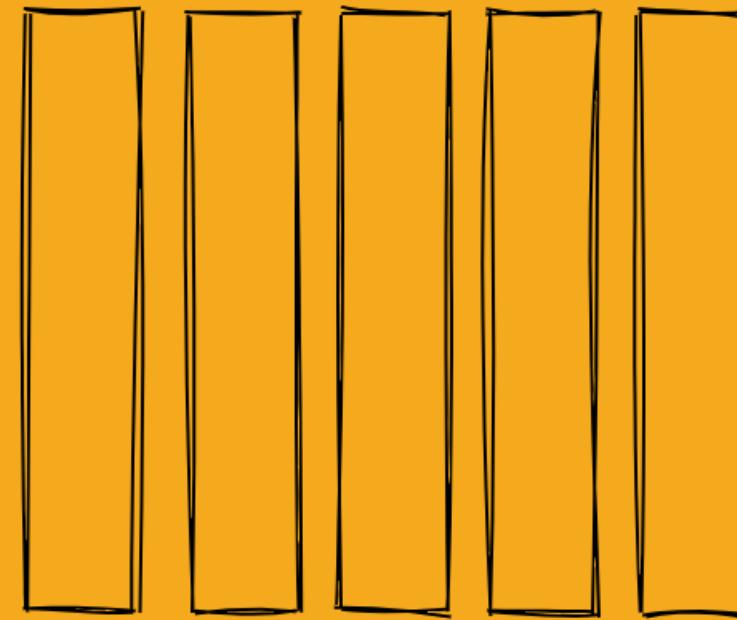
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Due Frontend, Due Aziende

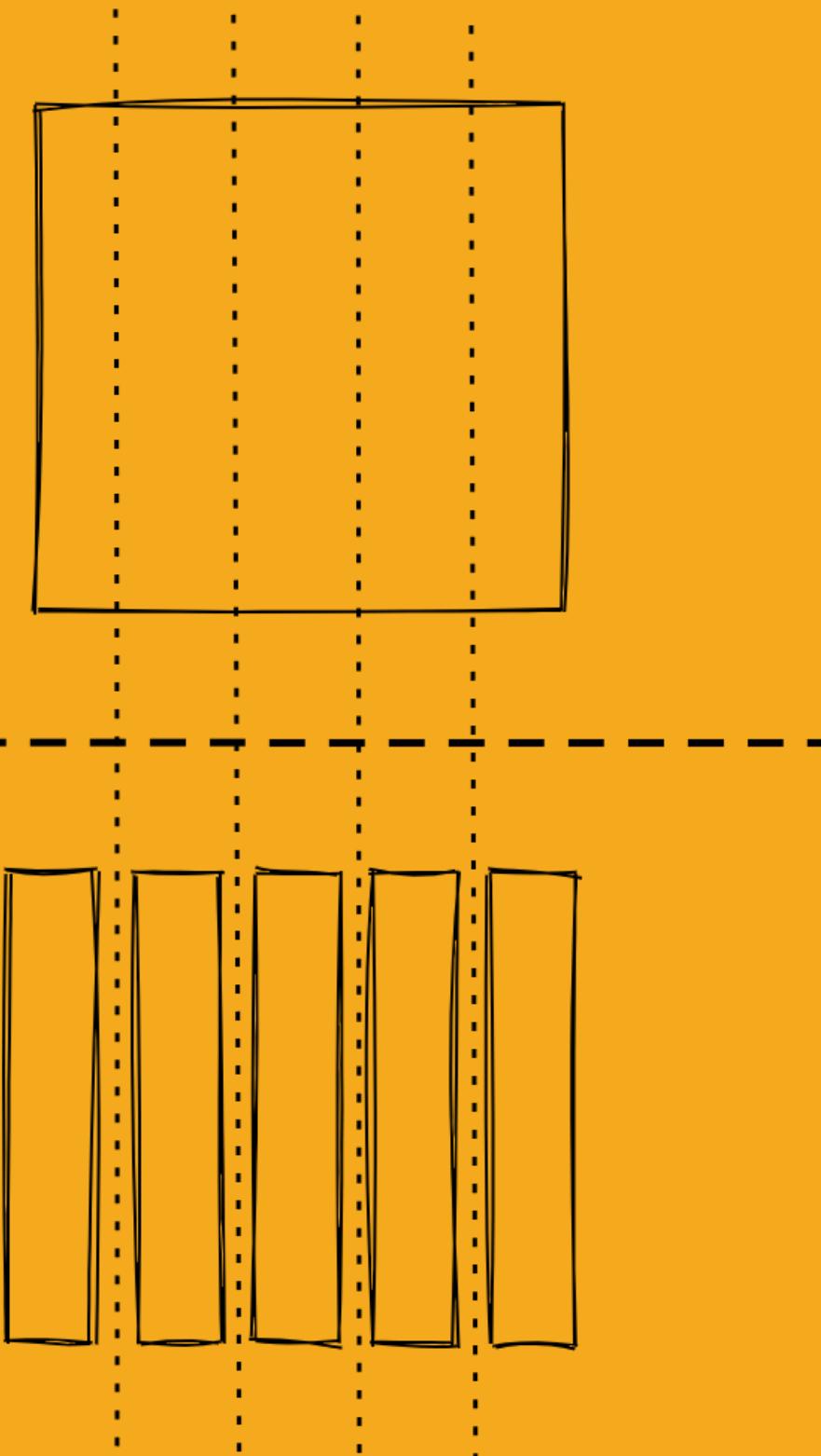
DAZN 1.0



DAZN 2.0

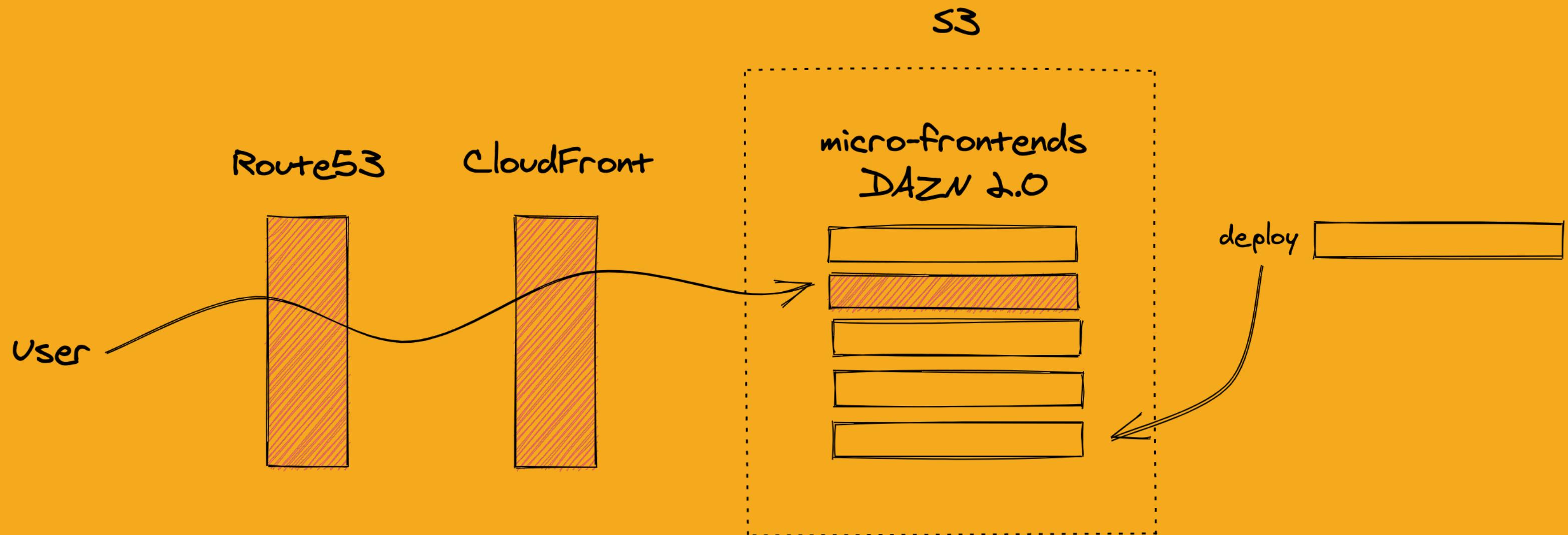


Monolita
DAZN 1.0



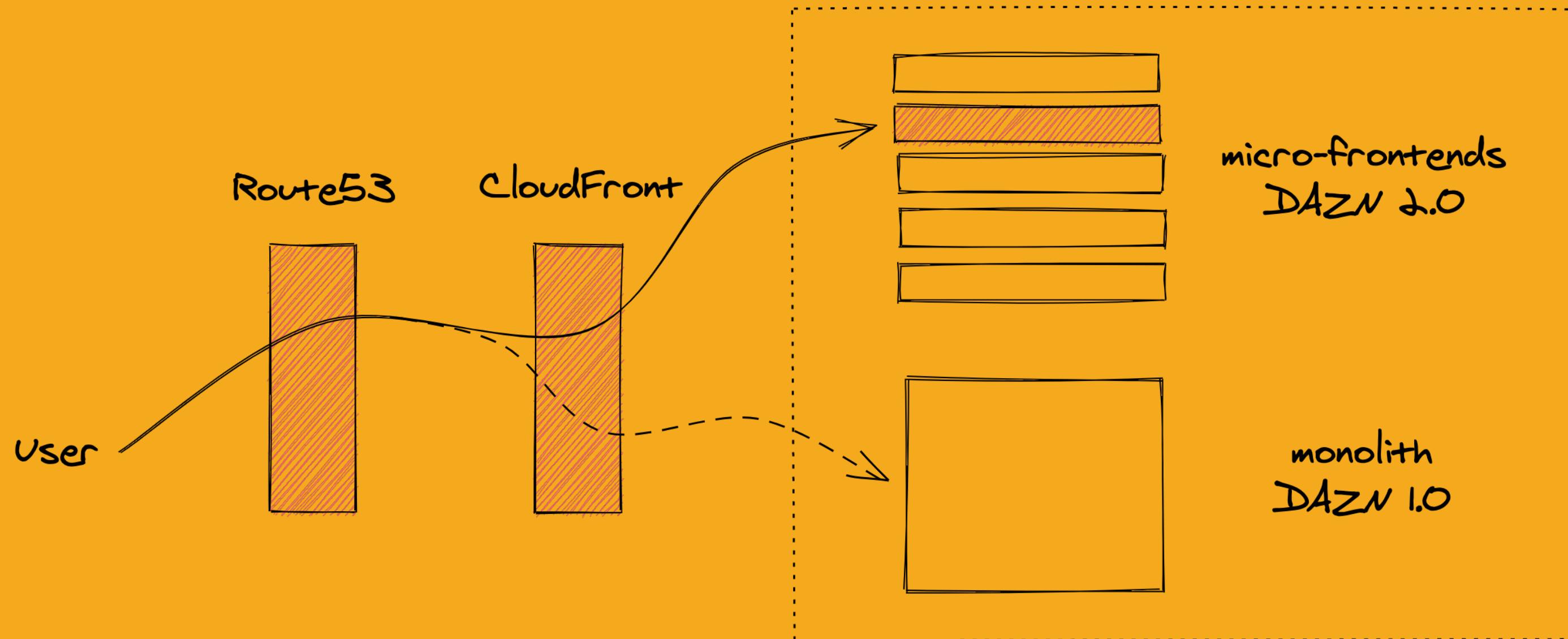
Micro-frontends
DAZN 2.0

Micro-frontends



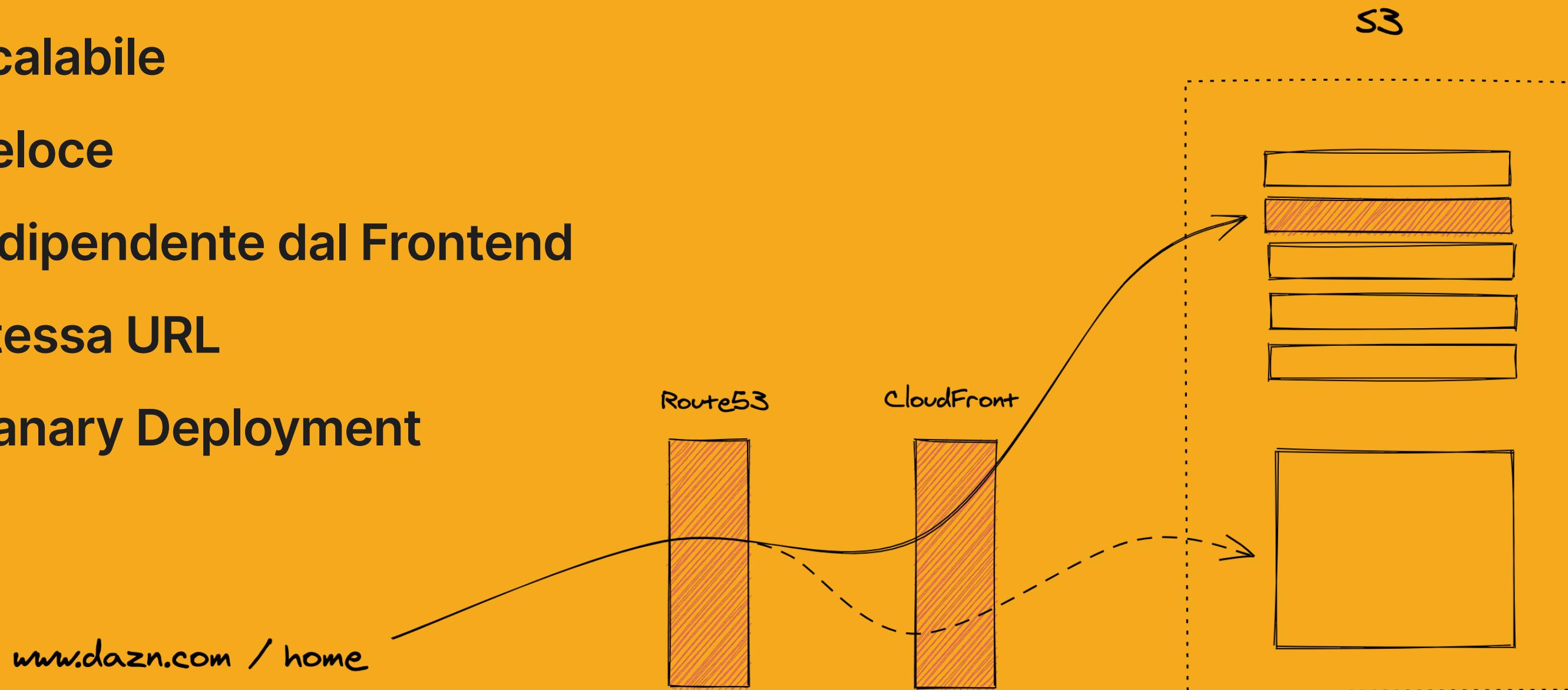
Quale Frontend ?

S3



Caratteristiche

- Scalabile
- Veloce
- Indipendente dal Frontend
- Stessa URL
- Canary Deployment



Contesto

Migrazione

Lambda @ Edge

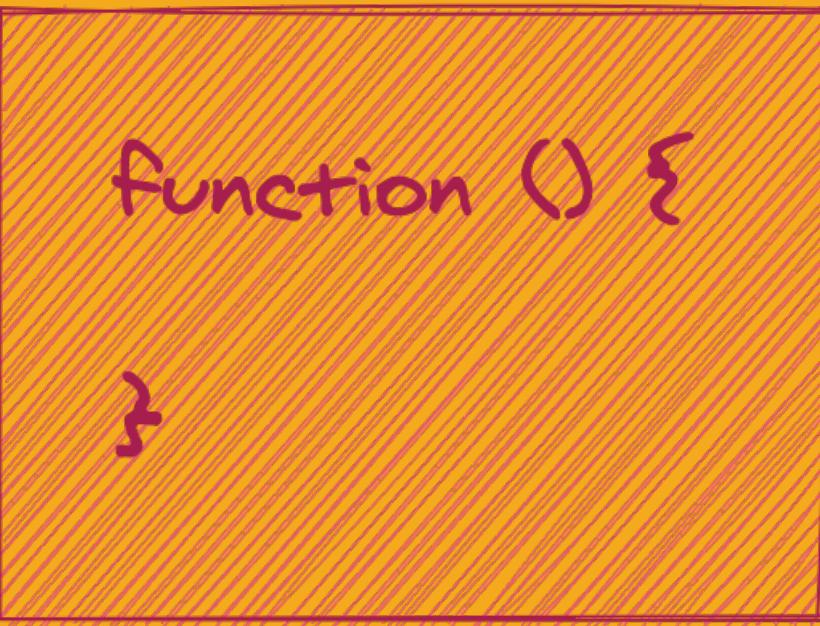
Analisi Soluzione

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Lambda @ Edge

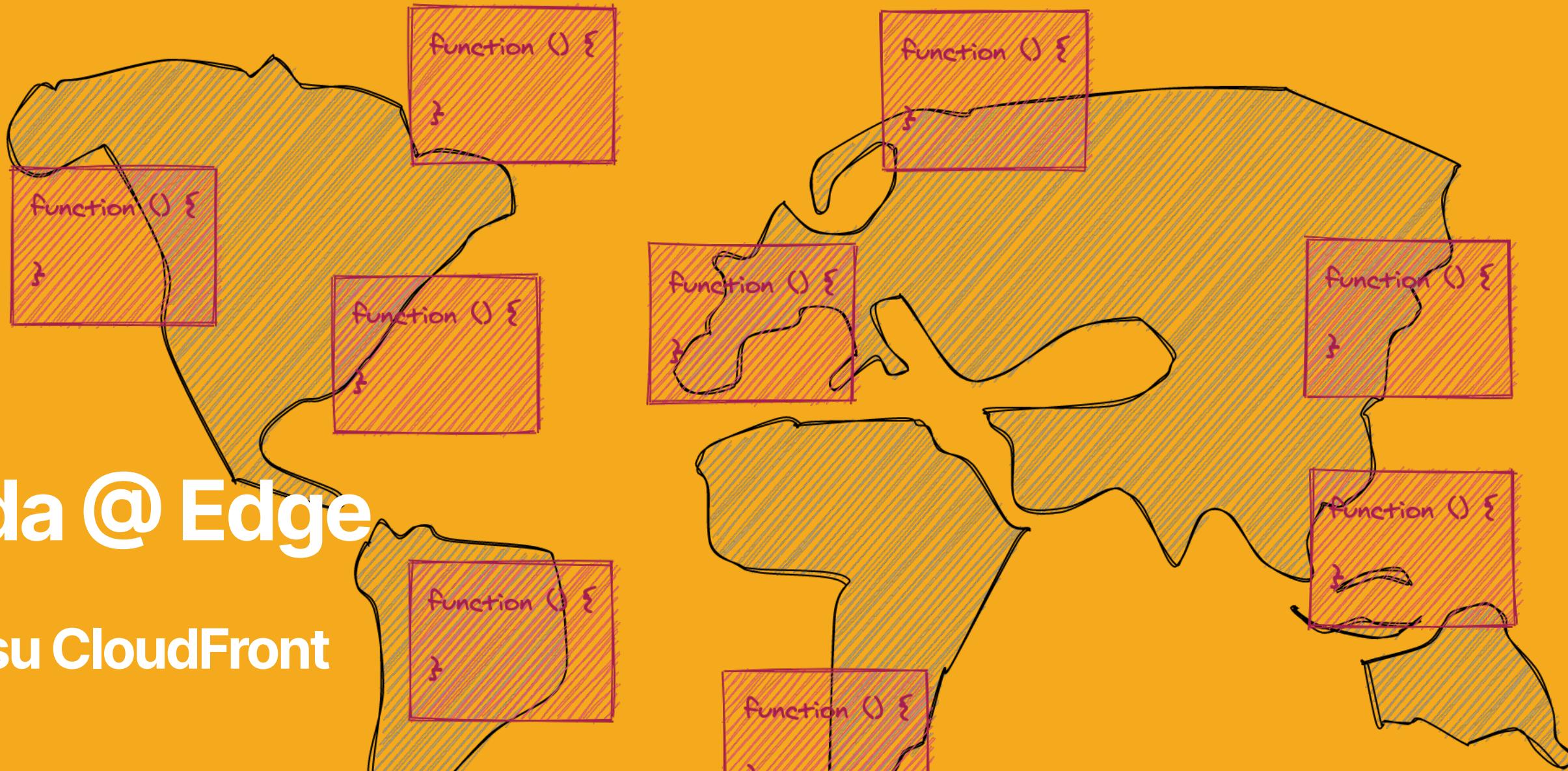
Come le AWS Lambda normali

- Nessuna infrastruttura da gestire
- Scalano automaticamente
- Paghi solo quando le usi



Lambda @ Edge

runnano su CloudFront

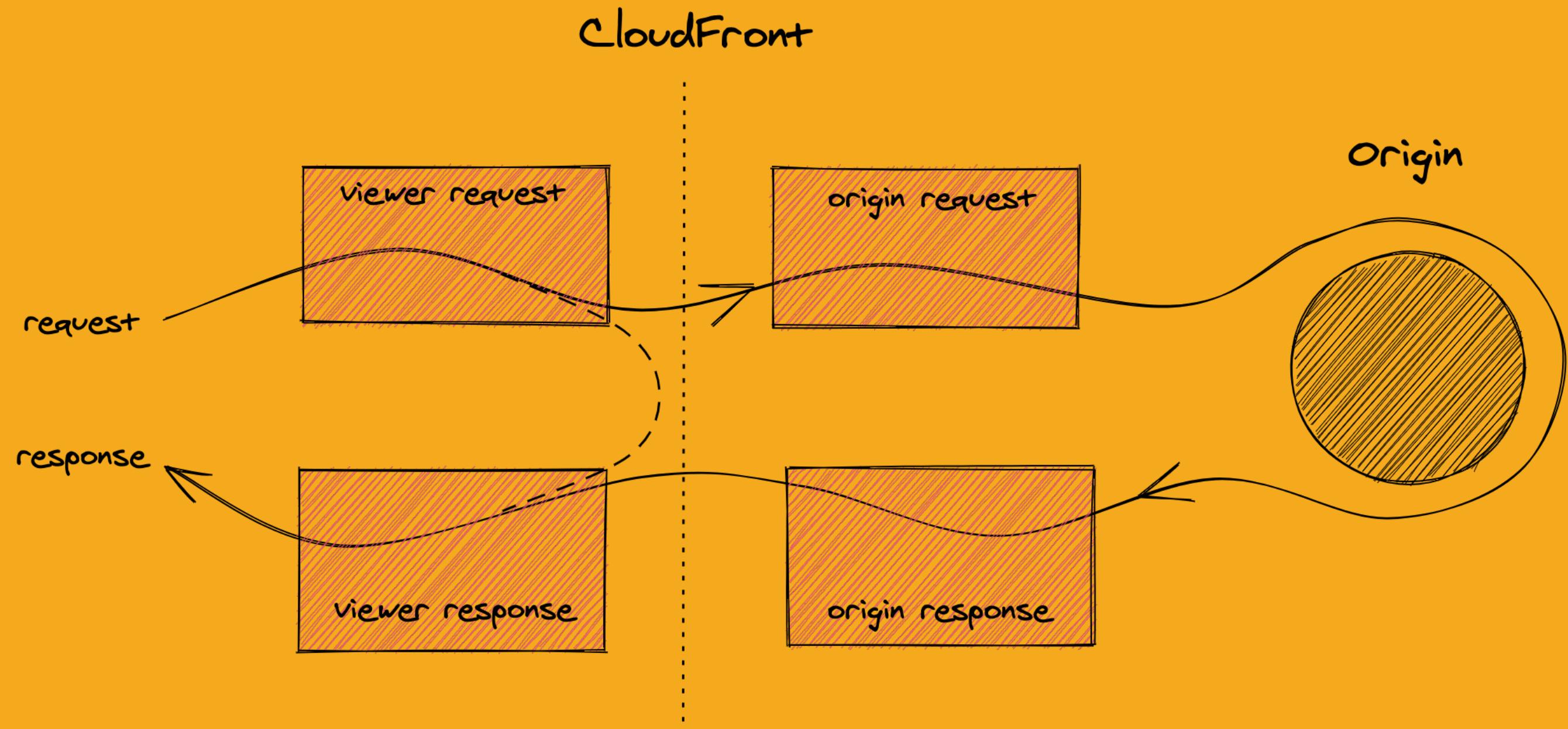


each



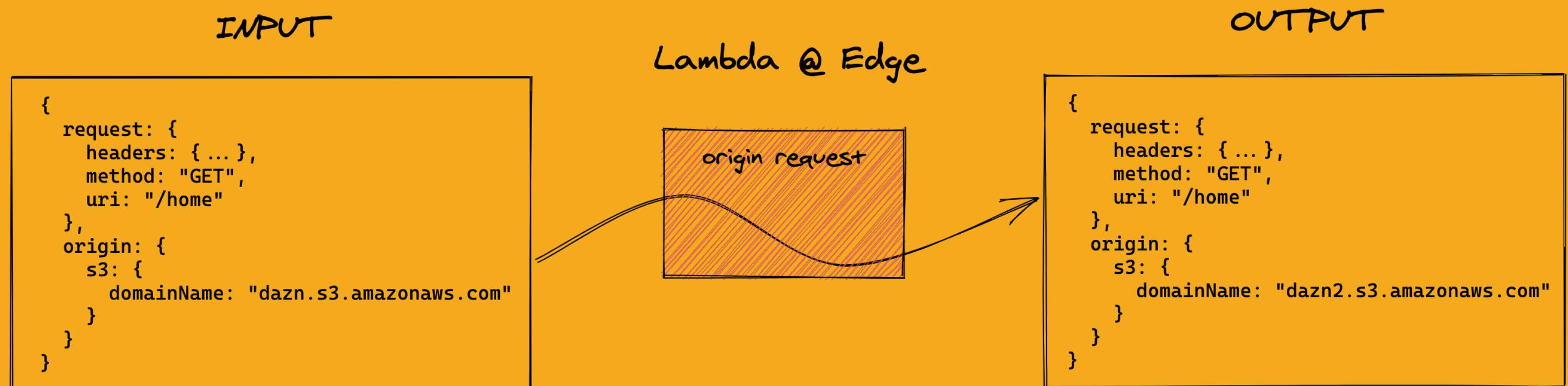
represents around 20 edge locations

Lambda @ Edge



Lambda @ Edge

CloudFront Events



L@E Challenge #1

Concurrent Limit

Limite di 1000 concurrent executions per ogni account, per region.

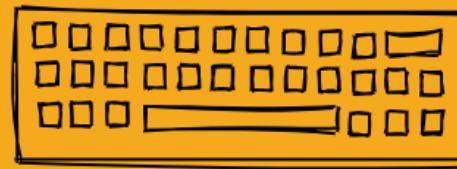
Esempio: **5000 RPS * 6ms execution time = 30 concurrent Lambda @ Edge**



L@E Challenge #2

Development

Il deploy delle Lambda@Edge nelle Edge Location può durare fino a 10 minuti.



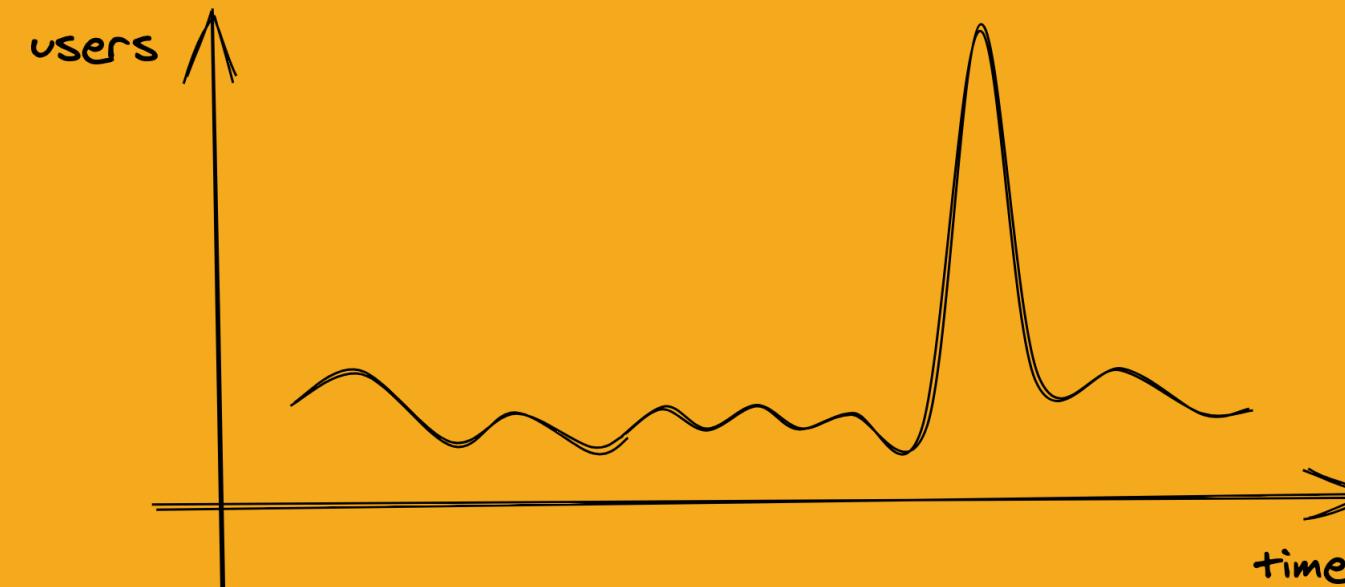
205 AWS Edge Locations

L@E Challenge #3

Metrics & Alarms

Disponibili nella regione dove la Lambda @ Edge ha runnato (11 AWS Regions).

Parzialmente aggregate nella console di CloudFront.



L@E Challenge #4

Lambda Logs

CloudWatch logs nella regione più vicina alla richiesta (11 AWS Regions).

us-east-1



eu-central-1



ap-northeast-2

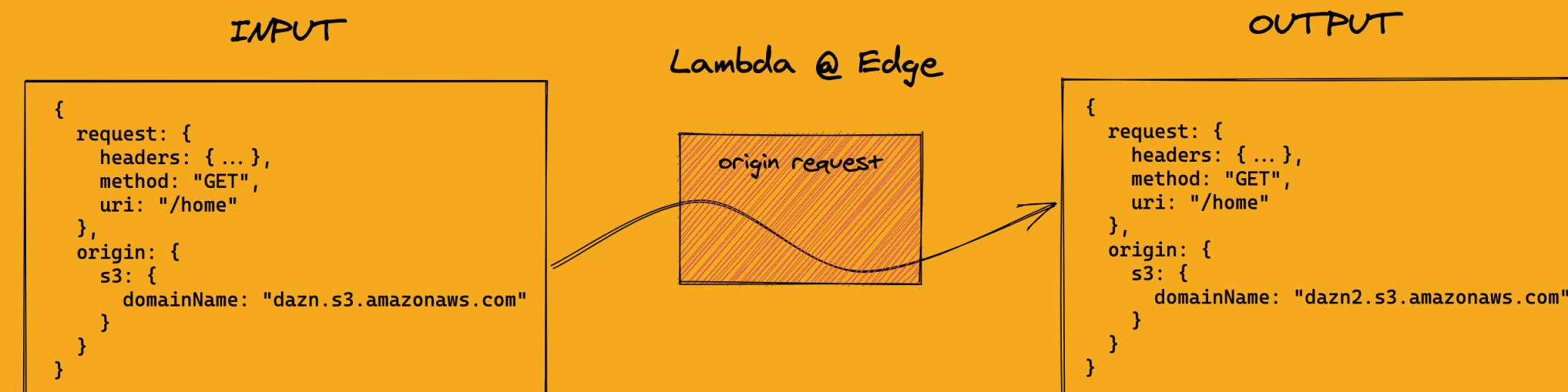


L@E Challenge #5

Lambda Validation Logs

CloudWatch logs sulla validazione degli output delle Lambda @ Edge.

Disponibili al log group: **/aws/cloudfront/LambdaEdge/DistributionId**



Contesto

Migrazione

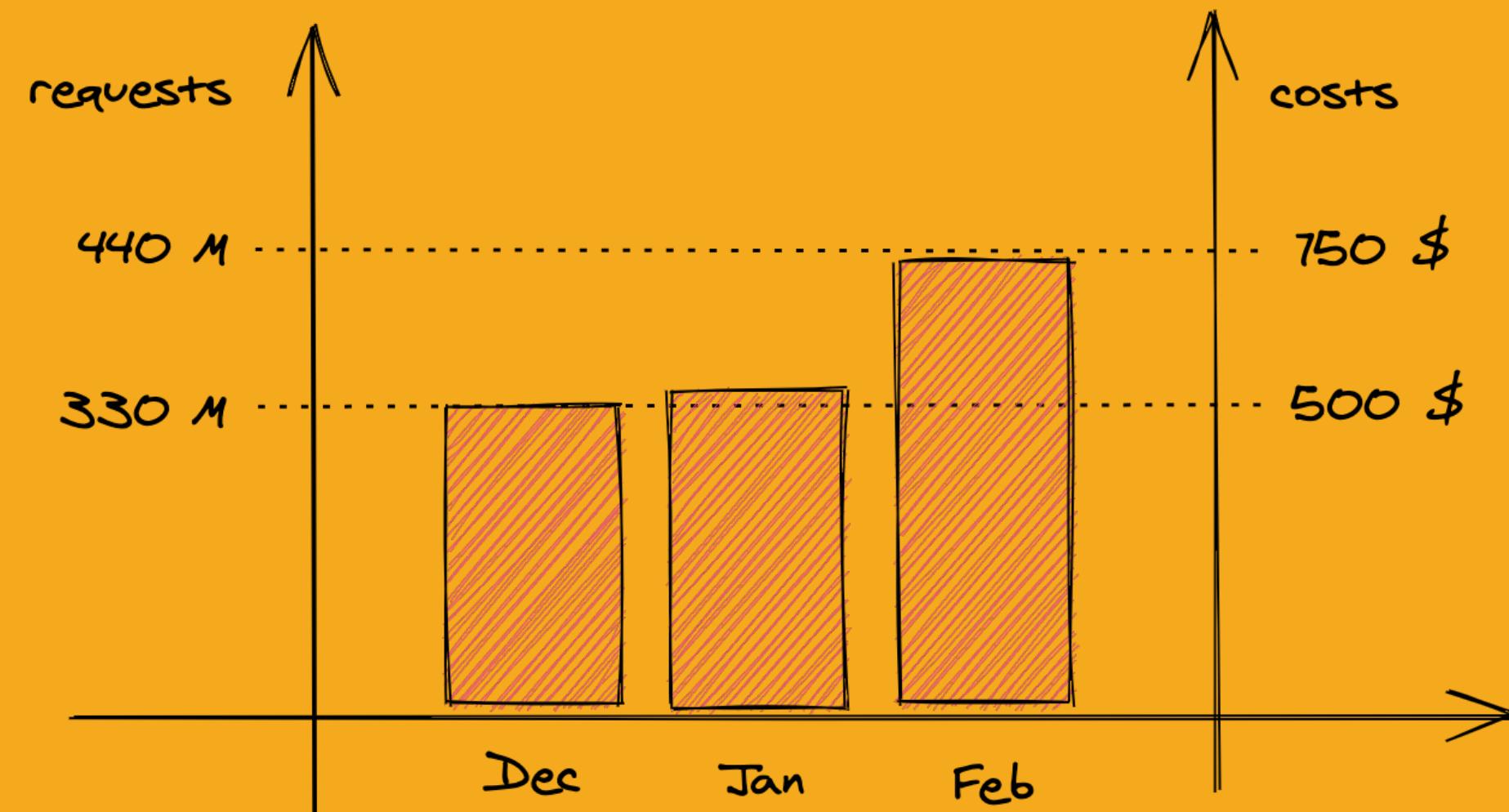
Lambda @ Edge

Analisi Soluzione

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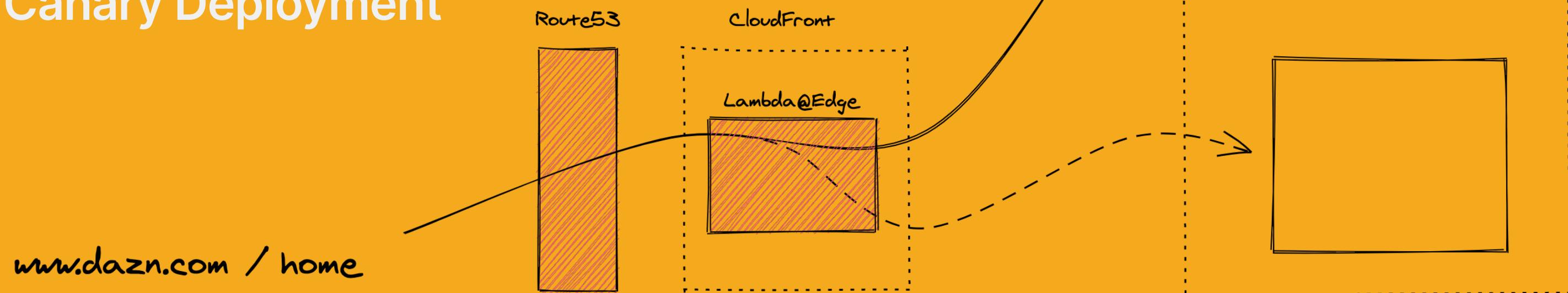
Costi

Con circa 2ms di tempo di esecuzione



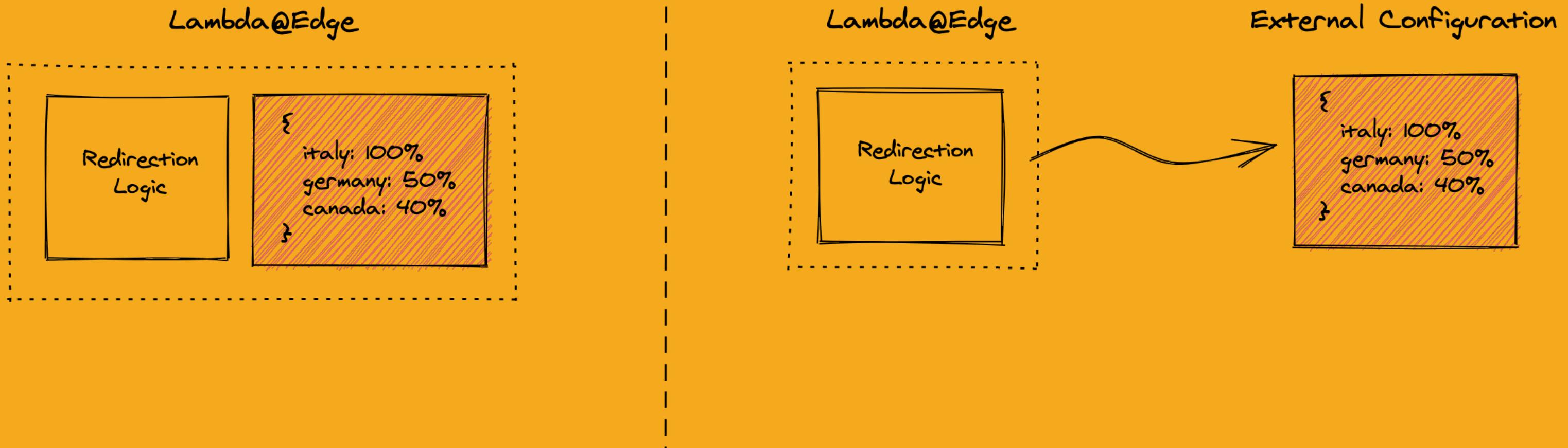
Lambda @ Edge in DAZN

- Scalabile
- Veloce
- Indipendente dal Frontend
- Stessa URL
- Canary Deployment



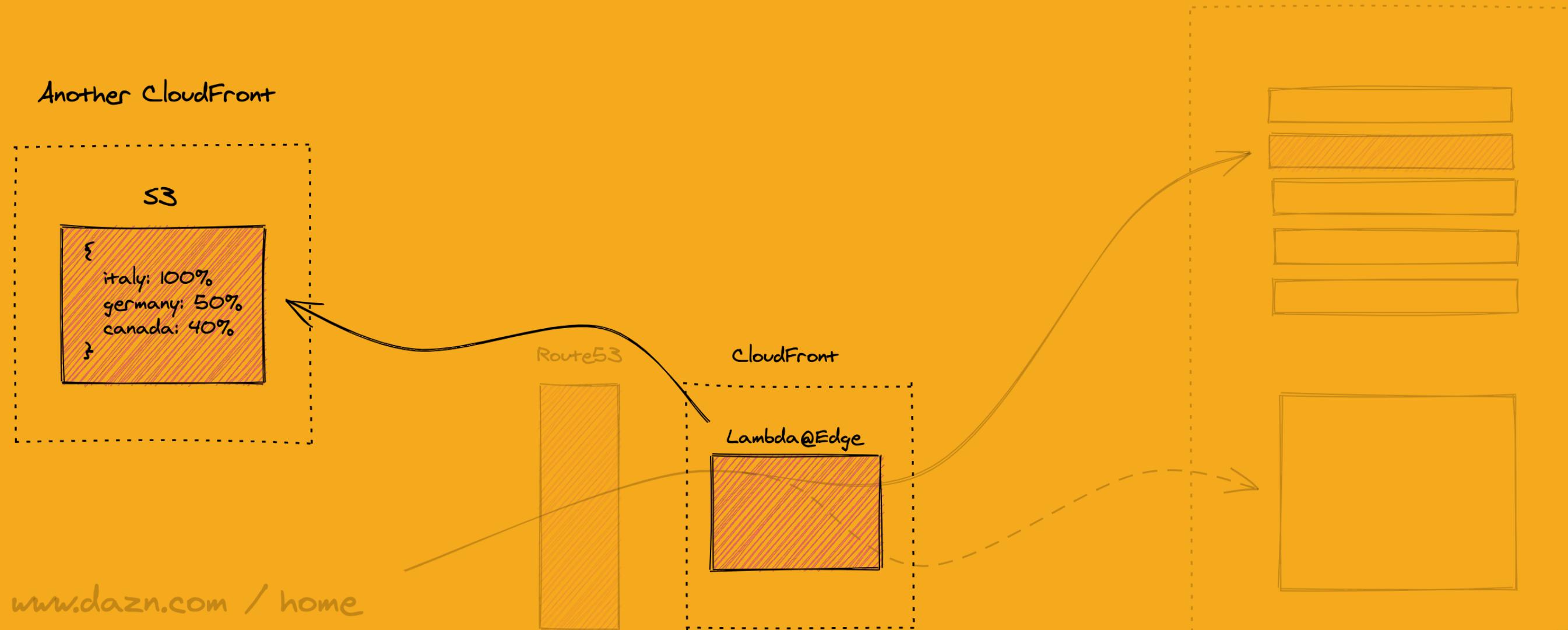
Canary Deployment

Due modi di gestire la configurazione



Canary Deployment

External Configuration

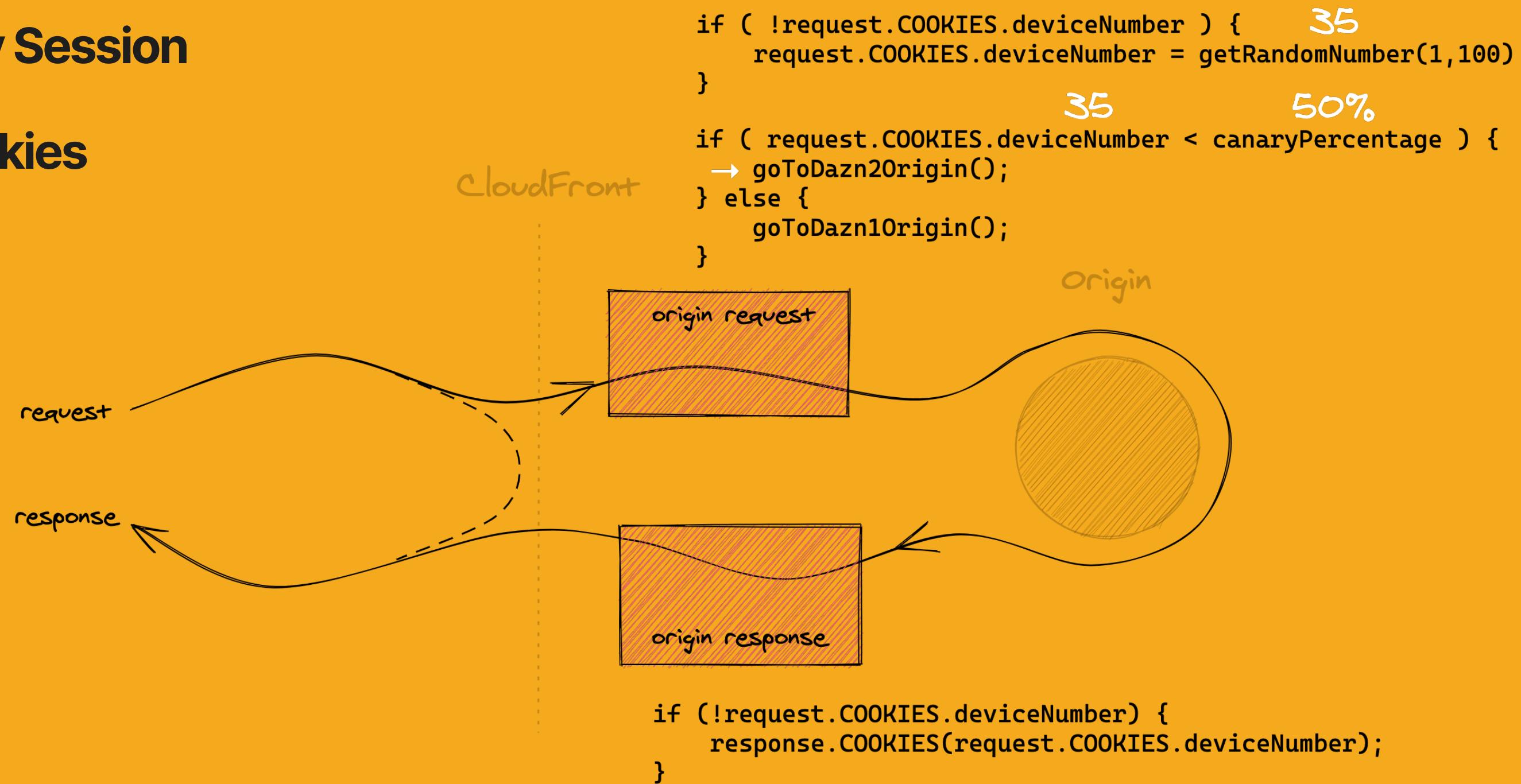


External data in Lambda@Edge: <https://aws.amazon.com/blogs/networking-and-content-delivery/leveraging-external-data-in-lambdaedge/>

Canary Deployment

Sticky Session

+ Cookies



TakeAways

- Contesto Contesto Contesto
- Lavorare sulle CDN è possibile
- Non solo AWS (Cloudflare Workers)
- Routing e Canary Release solo l'inizio (SSR¹, SEO ², Security Headers...)

¹Server Side Rendering

²Search Engine Optimisation

thank you

github.com/maxgallo/talk-micro-frontends-edge

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